We Claim:

1. A pair of cells comprising:

a first cell; and

a second cell,

wherein the first cell and the second cell are isogenic but for:

a gene of interest and a gene encoding a fluorescent protein;

wherein the first cell comprises a gene that encodes a first fluorescent protein having a first absorption spectrum and a first emission spectrum;

wherein the second cell comprises a gene that encodes a second fluorescent protein having a second absorption spectrum and a second emission spectrum; and

wherein either:

the first and second absorption spectra are not identical; and/or

the first and second emission spectra are not identical.

2. The pair of cells of claim 1 wherein the first and second absorption spectra are not identical and the first and second emission spectra are not identical.

3. The pair of cells of claim 1 wherein the cells are contained within the same undivided container.

4. The pair of cells of claim 1 wherein the first cell is homozygously wild-type for the gene of interest and wherein the second cell is homozygously mutant for the gene of interest.

5. The pair of cells of claim 1 wherein the gene of interest in the second cell is homozygously deleted.

6. The pair of cells of claim 1 wherein the first cell comprises two wild-type alleles of the gene of interest and wherein the second cell comprises a wild-type allele and a mutant allele of the gene of interest, wherein the mutant allele is dominant.

7. The pair of cells of claim 1 wherein the gene of interest is an oncogene and the first cell is homozygous for a mutant allele of the oncogene and wherein the second cell comprises a homozygous deletion of the mutant oncogene.

8. The pair of cells of claim 1 wherein the first cell expresses the gene of interest and wherein the second cell does not express the gene of interest.

9. The pair of cells of claim 1 wherein the first cell comprises a wild-type allele and a mutant allele of the gene of interest and the second cell is hemizygous for the wild-type allele of the gene of interest.

10. The pair of cells of claim 1 wherein the first cell expresses a protein encoded by the gene of interest and wherein the second cell does not express a protein encoded by the gene of interest.

11. The pair of cells of claim 1 wherein the first and second cells are mammalian cells.

12. The pair of cells of claim 1 wherein the first and second cells are human cells.

13. The pair of cells of claim 1 wherein the cells are cancer cells.

14. The pair of cells of claim 13 wherein the cancer cells are selected from the group consisting of colon tumor cells and breast tumor cells.

15. The pair of cells of claim 1 wherein the cells are HCT116 cells.

16. The pair of cells of claim 1 wherein the cells are DLD-1 cells.

17. The pair of cells of claim 1 wherein the first and second fluorescent proteins are selected from the group consisting of green fluorescent protein, red fluorescent protein, blue fluorescent protein, yellow fluorescent protein, and cyan fluorescent protein.

18. The pair of cells of claim 1 wherein the gene of interest is Ras and wherein the Ras genotype of the first cell is *c-Ki-Ras*$^{WT/mutant}$ and wherein the Ras genotype of the second cell is *c-Ki-Ras*$^{WT/null}$.

19. A pair of cells comprising:

a first cell wherein the Ras genotype of the first cell is *c-Ki-Ras*$^{WT/mutant}$ and wherein the first cell comprises a first gene that encodes a first fluorescent protein having a first absorption spectrum and a first emisson spectrum; and

a second cell wherein the Ras genotype of the second cell is *c-Ki-Ras*$^{WT/null}$ and wherein the second cell comprises a second gene that encodes a second fluorescent protein having a second absorption spectrum that is not identical to the first absorption spectrum and a second emission spectrum that is not identical to the first emission spectrum, wherein the first and second cells are isogenic but for the Ras gene and the gene encoding a fluorescent protein.

20. The pair of cells of claim 19 wherein the first fluorescent protein is blue fluorescent protein and the second fluorescent protein is yellow fluorescent protein.

21. A method of making a pair of cells, comprising the steps of:

genetically modifying a first cell to yield a second cell that is isogenic with the first cell but for a single gene of interest;

transfecting the first cell with a first gene that encodes a first fluorescent protein having a first absorption spectrum and a first emission spectrum; and

transfecting the second cell with a second gene that encodes a second fluorescent protein having a second absorption spectrum and a second emission spectrum, wherein either the first and second absorption spectra are not identical and/or the first and second emission spectra are not identical.

22. The method of claim 21 wherein the first and second absorption spectra are not identical and wherein the first and second emission spectra are not identical.

23. The method of claim 21 wherein the first and second cells are mammalian cells.

24. The method of claim 21 wherein the first and second cells are human cells.

25. The method of claim 24 wherein the human cells are human cancer cells.

26. The method of claim 25 wherein the human cancer cells are selected from the group consisting of colon tumor cells and breast tumor cells.

27. The method of claim 21 wherein the first and second cells are HCT116 cells.

28. The method of claim 21 wherein the first and second cells are DLD-1 cells.

29. The method of claim 21 wherein the Ras genotype of the first cell is *c-Ki-Ras*$^{WT/mutant}$ and wherein the Ras genotype of the second cell is *c-Ki-Ras*$^{WT/null}$.

30. A method of identifying a test compound as selectively affecting a gene of interest or its expression products or downstream genes or proteins in its pathway comprising the steps of:

culturing a first and second cell, wherein the first and second cells are isogenic but for a gene of interest and a gene encoding a fluorescent protein, wherein the first cell comprises a first gene that encodes a first fluorescent protein having a first absorption spectrum and a first emission spectrum, and wherein the second cell comprises a second gene that encodes a second fluorescent protein having a second absorption spectrum and a second emission spectrum, wherein either the first and second absorption spectra are not identical and/or the first and second emission spectra are not identical;

contacting the first and second cells with a test compound; and

identifying the test compound as selectively affecting the gene of interest or its expression products or downstream genes or proteins in its pathway if the growth rate of the first cell is altered with respect to the growth rate of the second cell.

31. The method of claim 30 wherein the first and second cells are co-cultured.

32. The method of claim 30 wherein an equal number of the first and second cells are cultured.

33. The method of claim 30, wherein the first and second absorption spectra are not identical and wherein the first and second emission spectra are not identical.

34. The method of claim 30 wherein the fluorescent proteins are detected using fluorescence microscopy to assess growth rate.

35. The method of claim 30 wherein the fluorescent proteins are detected using high-throughput fluorescence spectroscopy to assess growth rate.

36. The method of claim 30 wherein the first cell is homozygously wild-type for the gene of interest and wherein the second cell is homozygously mutant for the gene of interest.

37. The method of claim 30 wherein the gene of interest in the second cell is homozygously deleted.

38. The method of claim 30 wherein the first cell comprises two wild-type alleles of the gene of interest and wherein the gene of interest in the second cell comprises a wild-type allele and a mutant allele of the gene of interest, wherein the mutant allele is dominant.

39. The method of claim 30 wherein the first cell is homozygous for a mutant oncogene and wherein the second cell comprises a homozygous deletion of the mutant oncogene.

40. The method of claim 30 wherein the first cell expresses the gene of interest and wherein the second cell does not express the gene of interest.

41. The method of claim 30 wherein the first cell comprises a wild-type allele and a mutant allele of the gene of interest and wherein the second cell is hemizygous for a wild-type allele of the gene of interest.

42. The method of claim 30 wherein the first cell expresses a mutant protein encoded by the gene of interest and wherein the second cell does not express a protein encoded by the gene of interest.

43. The method of claim 30 wherein the first and second cells are mammalian cells.

44. The method of claim 30 wherein the first and second cells are human cells.

45. The method of claim 30 wherein the cells are cancer cells.

46. The method of claim 45 wherein the cancer cells are selected from the group consisting of colon tumor cells and breast tumor cells.

47. The method of claim 30 wherein the first and second cells are HCT116 cells.

48. The method of claim 30 wherein the first and second cells are DLD-1 cells.

49. The method of claim 30 wherein the first and second fluorescent protein are selected from the group consisting of green fluorescent protein, red fluorescent protein, blue fluorescent protein, yellow fluorescent protein, and cyan fluorescent protein.

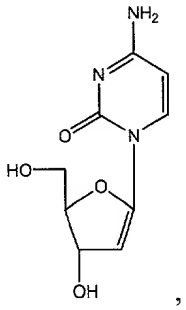
50. A method of identifying a test compound as selectively affecting a Ras gene, Ras protein, or downstream gene or protein in its pathway in cells comprising:

contacting a test compound with a co-culture of an essentially equal number of a first and a second cell that are isogenic but for their Ras genes and a gene encoding a fluorescent protein, wherein the Ras genotype of the first cell is *c-Ki-Ras*$^{WT/mutant}$ and wherein the first cell comprises a first gene encoding a first fluorescent protein having a first absorption spectrum and a first emisson spectrum and wherein the Ras genotype of the second cell is *c-Ki-Ras*$^{WT/null}$ and wherein the second cell comprises a second gene encoding a second fluorescent protein having a second absorption spectrum that is not identical to the first absorption spectrum and a second emission spectrum that is not identical to the first emission spectrum; and

identifying the test compound as selectively affecting the Ras gene, Ras protein, or downstream gene or protein in the pathway if the growth rate of the first cell is altered with respect to the growth rate of the second cell.

51. The method of claim 50 wherein the first fluorescent protein is blue fluorescent protein and wherein the second fluorescent protein is yellow fluorescent protein.

52. A composition comprising at least 90 % of a compound having a formula selected from the group consisting of:



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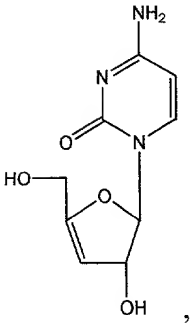
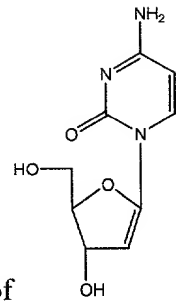
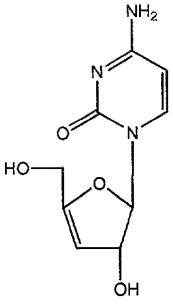
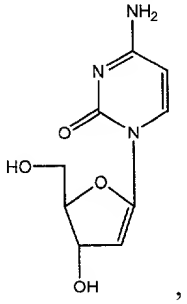


, and

a mixture of  and  .

53. A pharmaceutical composition comprising a compound with a formula selected from the group consisting of:



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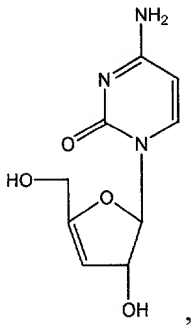
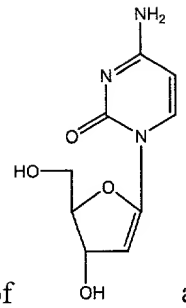
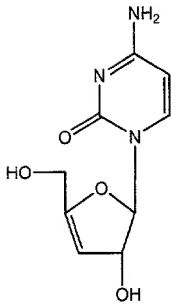
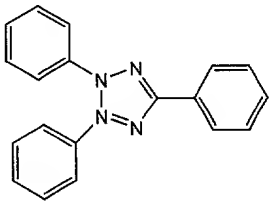


, and

a mixture of  and 

or pharmaceutically acceptable salts, solvates, or prodrugs thereof, and a pharmaceutically appropriate carrier.

54. A cytotoxic composition comprising a compound having a formula:

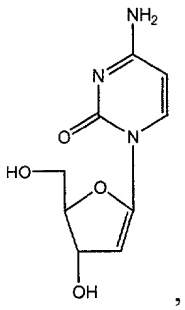


or a pharmaceutically acceptable salt, solvate, or prodrug thereof; and

a pharmaceutically appropriate carrier.

52. A method of treating cancer comprising:

administering to a patient in need thereof a therapeutically effective amount of a compound having a formula selected from the group consisting of:



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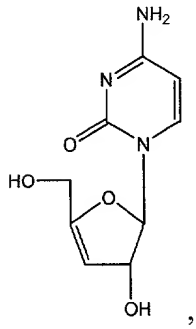
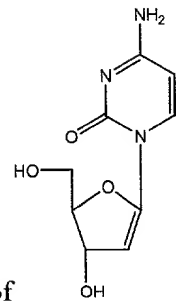
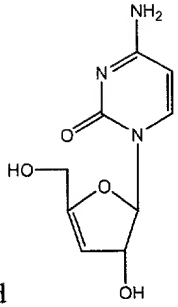


, and

a mixture of



and



or a pharmaceutically acceptable salt, solvate, or prodrug thereof, and a pharmaceutically appropriate carrier.